

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001768**Date Inspected:** 19-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M, 114M, Orthotropic Box Girder (OBG) and Tower, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Bay 1: ZPMC presented ZPMC Notification of witness inspection for magnetic particle testing of final weld. The assembly is identified as deck plate u-rib DP137-001-100. Caltrans QA witnessed ZPMC QC perform magnetic particle (MT) on fillet weld, joining diaphragm plate to u-rib, weld 100. The ZPMC QC inspector is identified as Mr. Zhou Dongyun. Caltrans observed that the QC MT coverage was 100% and performed in conformance with the contract specifications. The following digital picture illustrates ZPMC MT inspection in progress.

OBG Bay 1: Caltrans QA Inspector observed ZPMC removing Production Monitoring Test (PMT) macroetch test samples that were identified by Caltrans QA for removal. The samples were removed using a hand held oxy-fuel cutting torch. These samples are to be then machined, etched and evaluated for conformance with Caltrans Special Provisions. The PMT macroetch samples represent welding that was performed on deck panel DP005-001.

OBG Bay 4: The Caltrans QA Inspector observed ZPMC performing heat straightening operations on diaphragm plates identified as SA276 (N), HSR1 (T) 183 (O), revision 0 ; 43M BTM SA335 (N)P142, HSR1 (T) 221, revision 0 and 43M Top SA234 (W), HSR1 (T) 207, revision 0 . ZPMC was observed heating the plate manually with a rose-bud torch. Caltrans QA observed ZPMC Quality Control (QC) inspector, Mr. Zhao Chen Sun monitoring the

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heat straightening of the plate using a calibrated infra-red temperature indicating device to monitor the heat.

OBG Bay 1: Caltrans QA Inspector performed visual inspection of the completed submerged arc welding (SAW) cover pass welds; partial joint penetration (PJP) welds joining the closed ribs to deck plate panel DP135-001, u-rib U62, welds 1 & 2; u-rib U63, welds 3 & 4; u-rib U68, welds 5 & 6 and u-rib U58 welds 7 & 8 and u-rib U71, welds 9 & 10. Caltrans QA observed welding overlap, over size welds, underfill and incomplete fusion. These indications observed at the weld were marked in yellow paint stick along the distance from the "Y" axis, starting at the weld start to weld completion end. The weld indications observed were recorded on Caltrans spreadsheet for future reference.

Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler, Mike	Quality Assurance Inspector
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Reviewed By:	Cuellar, Robert	QA Reviewer
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